

NAME \_\_\_\_\_

PERIOD \_\_\_\_\_ DATE \_\_\_\_\_

## ABSOLUTE VALUE FUNCTION

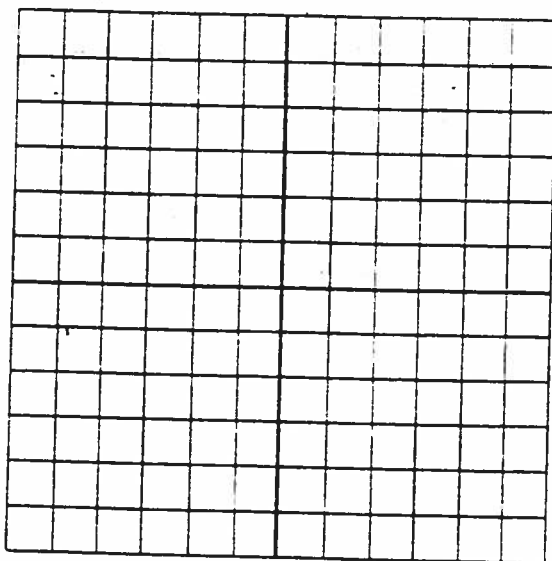
Graph each of these functions.

1)  $f(x) = |x|$

2)  $f(x) = |x| + 1$

3)  $f(x) = |x| - 3$

4)  $f(x) = |x| + 2$



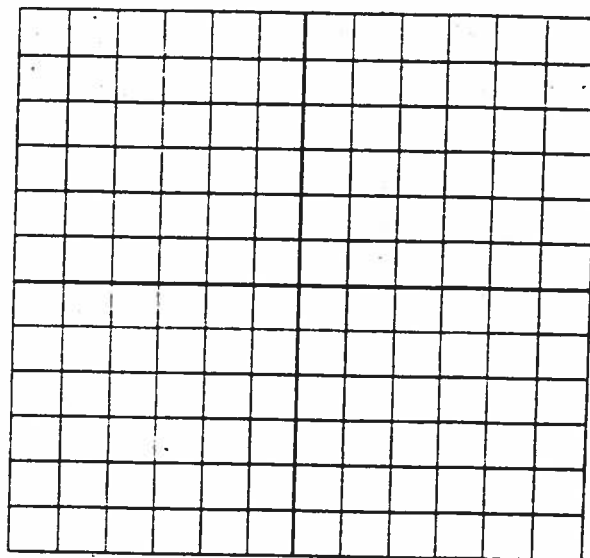
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4)  $f(x) = |x + 2|$

Consider  $f(x) = |x + a| + b$ Conclusions:  $a$  - \_\_\_\_\_ $b$  - \_\_\_\_\_Now, using your new found knowledge, graph  $f(x) = |x + 1| - 3$  on the coordinate grid above.Question: What do you think will make the graph of  $f(x) = |x|$  wider or narrower?

Provide an example to support your claim.